REMARKS

Claims 2-26, 32 and 35-41 are pending in this application. Claims 2-26, 32 and 35-41 stand rejected. Reconsideration and further examination of the subject patent application in light of the present Amendment and Remarks is respectfully requested.

Rejections Under 35 U.S.C. §103

Claims 2, 3, 7, 8 and 11-26 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Pat. Publ. No. US 2003/0021188 to Baranek et al. in view of U.S. Pat. No. 6,792,404 to Jacob Applicant respectfully traverses the rejections.

In response, independent claim 2 has been further limited to "circuits coupled to respective microphones including circuitry that automatically detects a received signal at a predetermined time, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio received by the respective microphones based upon the comparative depth of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility." Independent claim 7, 11 and 18 have been similarly limited. The automatic testing of the system for intelligibility is discussed in paragraph [0029] of the specification.

Claims 2, 3, 7, 8 and 11-26 are now clearly differentiated over Baranek et al. and Jacob. For example, rather than evaluating "intelligibility of audio received by the respective microphones based upon the comparative depth of modulation" Baranek et al. merely searches for a sonic wave created by gunfire. In this regard, Baranek et al. explicitly states that "If the signal received and transmitted by the transducer is of a sufficient decibel level and for a

sufficient time duration, it is determined by the detector to be a firearm discharge" (Baranek et al., par. [0014]).

However, as would be clearly understood by those of skill in the art, decibel level and duration of sonic waves has nothing to do with determining intelligibility. For example, an audible signal having a low decibel level (e.g., barely above a whisper) and high level of modulation would clearly have a higher level of intelligibility than a gunshot having a high decibel level delivered as a sonic wave.

Moreover, Webster's New Third International Dictionary defines "modulation" as the variation of a characteristic (as amplitude, frequency, or phase) of a carrier or signal in a periodic or intermittent manner for the transmission of intelligence." The sonic wave created by a gunshot neither contains modulation or transmits intelligence.

Since Baranek et al. is directed to detecting gunshots, Baranek et al. must be continuously activated in order to perform its intended purpose. As such, Baranek et al. teaches away from the periodic testing for intelligibility.

Similarly, Jacob is merely directed to a handheld spectrum analyzer 10 containing a STI measurement algorithm. Moreover, rather than being adapted for automatic testing, Jacob explicitly provides "a selector for activating an STI measurement in accordance with the invention" (Jacob, col. 2, lines 1-2). As such, both Baranek et al. and Jacob teach away from automatically testing for intelligibility at predetermined time periods.

The Office Action asserts that "official notice is taken [of] the concept of having [at] least some of [the] microphones carried by respective ones of the detectors is merely an obvious variation of the engineering design based on his need-with no unexpected results produced"

(Office Action of 6/24/09, page 4). However, as would be clear to those of skill in the art, the unexpected result lies in the integration of intelligibility testing into an alarm system and the placement of the microphones onto alarm detectors would not be obvious because there is not recognition that intelligibility testing could be combined with an alarm system. If the Examiner believes that the combination of microphones with ambient condition detectors is obvious, then it is respectfully requested that the Examiner provide a citation of such combination as required by MPEP §2144.03.

Moreover, the Office Action fails to provide any motivation for combining Baranek et al. with Jacob other than hindsight analysis based upon the use of the Applicant's specification as a template. In this regard, "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" (KSR, 550 U.S. at 398 (2007), 82 USPQ2d at 1396).

In the case at hand, Baranek et al. explicitly states that "Sonic waves monitored by the transducer are communicated through an amplifier and though filters which only pass a signal that is between a certain high point and low point on the decibel scale" (Baranek et al., par. [0014]). However, as would be abundantly clear to those of skill in the art, intelligibility testing would require passing all signals, not just those between a certain high point and low point on the decibel scale. Moreover, modifying Baranek et al. to pass all signals would involve a fundamental change in the way that Baranek et al. operates.

In addition, claim 2 is limited to "a plurality of fixedly mountable microphones; circuits . . . including circuitry that . . . analyzes the received signal . . . generates an indicator of

intelligibility on a per microphone basis." Since Baranek et al. detects gunfire, Baranek et al. does not generate "an indicator of intelligibility on a per microphone basis."

Similarly, Jacob is explicitly directed to a handheld spectrum analyzer with "a selector 11 for activating an STI measurement." Since Jacob is directed to a handheld spectrum analyzer, Jacob also fails to provide "a plurality of fixedly mounted microphones" that generate "an indicator of intelligibility on a per microphone basis."

For any of the above reasons, the combination of Baranek et al. and Jacob fails to teach or suggest each and every claim limitation. In addition, the combination (and Office Action) fails to provide any teaching, suggestion or other reason to combine Baranek et al. and Jacob. Since the combination fails to teach or suggest each and every claim limitation and there isn't any reason to combine Baranek et al. and Jacob, the rejections are improper and should be withdrawn.

Claims 4-6, 9, 10, 32, and 35-41 stand rejected under 35 U.S.C. §103(a) as being obvious over by U.S. Pat. Publ. No. US 2003/0021188 to Baranek et al. in view of U.S. Pat. No. 6,792,404 to Jacob and U.S. Pat. Publ. No. US 2003/0128850 to Kimura et al. Applicant respectfully traverses these rejections.

In response, claim 4 has been further limited to "circuits coupled to respective microphones including circuitry that automatically detects a received signal at a predetermined time, that analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, that evaluates intelligibility of audio received by the respective microphones based upon the comparative depth of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility and that generates

an indicator of intelligibility on a per microphone basis, the circuits each include a network output port and circuitry that produces prestored speech intelligibility test signals." Independent claims 9, 32, 37 and 40 have been similarly limited. The automatic testing of the system for intelligibility is discussed in paragraph [0029] of the specification.

Claims 4-6, 9, 10, 32, 35, 36 and 38-41 are now clearly differentiated over Baranek et al., Jacob and Kimura et al. For example, rather than evaluating "intelligibility of audio received by the respective microphones based upon the comparative depth of modulation" Baranek et al. merely searches for a sonic wave created by gunfire. In this regard, Baranek et al. explicitly states that "If the signal received and transmitted by the transducer is of a sufficient decibel level and for a sufficient time duration, it is determined by the detector to be a firearm discharge" (Baranek et al., par. [0014]).

However, as would be clearly understood by those of skill in the art, decibel level and duration of sonic waves has nothing to do with determining intelligibility. For example, an audible signal having a low decibel level (e.g., barely above a whisper) and high level of modulation would clearly have a higher level of intelligibility than a gunshot having a high decibel level delivered as a sonic wave.

Moreover, Webster's New Third International Dictionary defines "modulation" as the variation of a characteristic (as amplitude, frequency, or phase) of a carrier or signal in a periodic or intermittent manner for the transmission of intelligence." The sonic wave created by a gunshot neither contains modulation or transmits intelligence.

Since Baranek et al. is directed to detecting gunshots, Baranek et al. must be continuously activated in order to perform its intended purpose. As such, Baranek et al. teaches away from the periodic testing for intelligibility.

Similarly, Jacob is merely directed to a handheld spectrum analyzer 10 containing a STI measurement algorithm. Moreover, rather than being adapted for automatic testing, Jacob explicitly provides "a selector for activating an STI measurement in accordance with the invention" (Jacob, col. 2, lines 1-2). As such, both Baranek et al. and Jacob teach away from automatically testing for intelligibility at predetermined time periods.

In contrast, Kimura et al. is merely directed to the damping of reverberation of loudspeaker signals in closed spaces by modifying a broadcast content. However, the damping of reverberation of loudspeaker signals in closed spaces is not the same as determining an indicator of intelligibility."

Moreover, the Office Action fails to provide any motivation for combining Baranek et al. with Jacob and Kimura et al. other than hindsight analysis based upon the use of the Applicant's specification as a template. In this regard, "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" (KSR, 550 U.S. at 398 (2007), 82 USPQ2d at 1396).

In the case at hand, Baranek et al. explicitly states that "Sonic waves monitored by the transducer are communicated through an amplifier and though filters which only pass a signal that is between a certain high point and low point on the decibel scale" (Baranek et al., par. [0014]). However, as would be abundantly clear to those of skill in the art, intelligibility testing

would require passing all signals, not just those between a certain high point and low point on the decibel scale. Moreover, modifying Baranek et al. to pass all signals would involve a fundamental change in the way that Baranek et al. operates.

In addition, independent claim 4 is limited to "a plurality of fixedly mountable microphones . . . circuits . . . including circuitry that . . . analyzes the received signal . . . generates an indicator of intelligibility on a per microphone basis." Independent claims 9, 32 and 37 contain similar limitations. Since Baranek et al. detects gunfire, Baranek et al. does not generate "an indicator of intelligibility on a per microphone basis."

Similarly, Jacob is explicitly directed to a handheld spectrum analyzer with "a selector 11 for activating an STI measurement." Since Jacob is directed to a handheld spectrum analyzer, Jacob also fails to provide "a plurality of fixedly mountable microphones" or generate "an indicator of intelligibility on a per microphone basis."

Kimura et al. is simply directed to a system for broadcasting appropriate content without sound clearness. Since Kimura et al. is directed broadcasting a signal, Kumura et al. also fails to generate "an indicator of intelligibility on a per microphone basis."

For any of the above reasons, the combination of Baranek et al., Jacob and Kimura et al. fails to teach or suggest each and every claim limitation. In addition, the combination (and Office Action) fails to provide any teaching, suggestion or other reason to combine Baranek et al., Jacob and Kimura et al. Since the combination fails to teach or suggest each and every claim limitation and there isn't any reason to combine Baranek et al., Jacob and Kimura et al., the rejections are improper and should be withdrawn.

Closing Remarks

For the foregoing reasons, applicant submits that the subject application is in condition for allowance and earnestly solicits an early Notice of Allowance. Should the Primary Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, the Primary Examiner is respectfully requested to call the undersigned at the below-listed number.

The Commissioner is hereby authorized to charge any additional fee which may be required for this application under 37 C.F.R. §§ 1.16-1.18, including but not limited to the issue fee, or credit any overpayment, to Deposit Account No. 23-0920. Should no proper amount be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 23-0920. *(If filed by paper, a duplicate copy of this sheet(s) is enclosed).*

Respectfully submitted,

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